

**WHAT IS CLAIMED IS:**

1. A current feedback-type operational amplifier comprising multiple input parts and one output part, wherein each of said multiple input parts comprises a first input terminal, a second input terminal, and first output terminal, the signals input from said first input terminal are buffer amplified and output to said second input terminal, and current is output to the first output terminal in an amount corresponding to the current that flows to said second input terminal;  
said output terminal part comprises a third input terminal and a second output terminal, signals obtained by adding in terms of current the signals of all of said multiple input parts are input to said third input terminal, and the signals input to said third input terminal are converted to voltage signals, amplified, and output to the second output terminal as an output signal; and
- 15 one of said multiple input parts is made effective and the other of said multiple input parts are made ineffective in response to a first external signal, the impedance of said first input terminal, said second input terminal, and said first output terminal of said ineffective input parts becomes high and the output current from said first output terminal becomes zero, and only the signals input to said effective input parts are thereby amplified.
2. The current feedback-type operational amplifier as described in claim 1, wherein all of said multiple input parts and said output part are

made ineffective in response to second external signals; this results in the impedance of said first input terminal and said second input terminal of said ineffective input parts becoming high and the output current from said output terminal becoming zero; and the impedance of said output terminal 5 of said output part becomes high.

3. The current feedback-type operational amplifier according to claim 1, wherein each of said input parts outputs current to said first output terminal in the same amount as the current flowing to said second input 10 terminal.

4. The current feedback-type operational amplifier according to claim 1, wherein each of said input parts comprises a voltage buffer that regards said first input terminal as its input terminal and said second input 15 terminal as its output terminal, and a current mirror circuit connected to said voltage buffer.

5. A signal-switching amplifying apparatus comprising a current feedback-type operational amplifier comprising multiple input parts and 20 one output part, wherein each of said multiple input parts comprises a first input terminal, a second input terminal, and first output terminal, the signals input from said first input terminal are buffer amplified and output to said second input terminal, and current is output to the first output

terminal in an amount corresponding to the current that flows to said second input terminal;

5        said output terminal part comprises a third input terminal and a second output terminal, signals obtained by adding in terms of current the signals of all of said multiple input parts are input to said third input terminal, and the signals input to said third input terminal are converted to voltage signals, amplified, and output to the second output terminal as an output signal; and

10        one of said multiple input parts is made effective and the other of said multiple input parts are made ineffective in response to a first external signal, the impedance of said first input terminal, said second input terminal, and said first output terminal of said ineffective input parts becomes high and the output current from said first output terminal becomes zero, and only the signals input to said effective input parts are 15 thereby amplified.

6.        A variable-gain amplifying apparatus which comprises a current feedback-type operational amplifier comprising multiple input parts and one output part, wherein each of said multiple input parts comprises a first input terminal, a second input terminal, and first output terminal, the signals input from said first input terminal are buffer amplified and output to said second input terminal, and current is output to the first output terminal in an amount corresponding to the current that flows to said second input terminal;

5 said output terminal part comprises a third input terminal and a second output terminal, signals obtained by adding in terms of current the signals of all of said multiple input parts are input to said third input terminal, and the signals input to said third input terminal are converted to voltage signals, amplified, and output to the second output terminal as an output signal; and

10 one of said multiple input parts is made effective and the other of said multiple input parts are made ineffective in response to a first external signal, the impedance of said first input terminal, said second input terminal, and said first output terminal of said ineffective input parts becomes high and the output current from said first output terminal becomes zero, and only the signals input to said effective input parts are thereby amplified.

15 7. A variable-band amplifying apparatus which comprises a current feedback-type operational amplifier comprising multiple input parts and one output part, wherein each of said multiple input parts comprises a first input terminal, a second input terminal, and first output terminal, the signals input from said first input terminal are buffer amplified and output 20 to said second input terminal, and current is output to the first output terminal in an amount corresponding to the current that flows to said second input terminal;

said output terminal part comprises a third input terminal and a second output terminal, signals obtained by adding in terms of current the

signals of all of said multiple input parts are input to said third input terminal, and the signals input to said third input terminal are converted to voltage signals, amplified, and output to the second output terminal as an output signal; and

- 5 one of said multiple input parts is made effective and the other of said multiple input parts are made ineffective in response to a first external signal, the impedance of said first input terminal, said second input terminal, and said first output terminal of said ineffective input parts becomes high and the output current from said first output terminal
- 10 becomes zero, and only the signals input to said effective input parts are thereby amplified.